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| 10/550,233 | 09/22/2005 | Urs A. Weidmann | ISLER 3.3-005 | 1767 |

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| EXAMINER |
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CHIESA, RICHARD L

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| ART UNIT | PAPER NUMBER |
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1724

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 02/02/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/550,233

Applicant(s)

WEIDMANN, URS A.

Examiner

Richard L. Chiesa

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>September 22, 2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Response to Amendment

2. The preliminary amendment filed on November 14, 2005 has been entered.

Drawings

3. The drawings filed on September 22, 2005 are accepted by the examiner.

Specification

4. The abstract of the disclosure is objected to because it contains the legal expressions "comprising" (third line) and "said" (fifth line). These words should apparently be changed to -- including-- and --the--. Correction is required. See MPEP § 608.01(b).

5. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "comprising", "means", and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

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The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

6. The specification is objected to because the references to the claims are improper (page 2, line 15, and page 3, lines 11, 12) and should be deleted. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. More specifically, the phrase “, in particular, via a syphon.” at the end of claim 3 is somewhat ambiguous. Perhaps, this phrase should be changed to read --via a syphon.--.

Claim Rejections - 35 USC § 102/103

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1, 2, 9, and 10 are rejected under 35 USC 102(b) as anticipated by, or, in the alternative, under 35 USC 103(a) as obvious over U.S. Patent No. 2,825,210 to Carr. Carr (note Figures 1-6) shows a plate heat exchanger with building exhaust air 12, another air stream 13, and a water distribution system 29, 30 (note col. 4, line 20 to col. 6, line 5) as claimed (35 USC 102b). It would appear that Carr may not explicitly state that the building exhaust air is from rooms to be ventilated. However, Carr does disclose that the plate heat exchanger is used in conjunction with a building central air conditioning system (note col. 2, lines 67-71). Therefore, it is inherent or at least would have been readily obvious to one having ordinary skill in the art (35 USC 103a) in view of Carr's discussion that the building exhaust air originates in the rooms of the building.

11. Claim 3 is rejected under 35 USC 103(a) as being unpatentable over Carr in view of U.S. Patent No. 3,800,505 to Tarves, Jr. Carr, as described above in paragraph 10, discloses a plate heat exchanger substantially as claimed. Apparently, Carr may not explicitly mention the use of a water collection device and water discharge. In any case, Tarves, Jr. (note Figure 1) teaches the well-known uses of a water collection device 44 and discharge 78 in a plate heat exchanger for the purpose of ensuring proper disposal of contaminated water (note col. 4, lines 6-59). It therefore would have been obvious to one having ordinary skill in the art to employ a water collection device and discharge in the Carr plate heat exchanger in order to facilitate the removal of contaminated water as taught by Tarves, Jr.

12. Claims 4 and 7 are rejected under 35 USC 103(a) as being unpatentable over Carr in view of U.S. Patent No. 5,039,318 to Johansson. Carr, as described above in paragraph 10, discloses a plate heat exchanger substantially as claimed. However, Carr apparently does not disclose the use of a conductive plate and an ionization device. Johansson (note Figures 1-4) teaches the use of a conductive plate 5 and an ionization device 4 in a plate heat exchanger for the purpose of enhancing the deposition of dust and moisture (note col. 2, line 58 to col. 3, line 12). It would have been obvious to one having ordinary skill in the art to employ a conductive plate and ionization device in the Carr plate heat exchanger in order to facilitate dust and moisture deposition as taught by Johansson.

13. Claim 5 is rejected under 35 USC 103(a) as being unpatentable over the prior art as applied to claim 4 above, and further in view of U.S. Patent No. 5,141,529 to Oakley et al. The prior art, as described above in paragraph 12, discloses an electrostatic plate heat exchanger substantially as claimed with the possible exception of an ionization filament network. Oakley et al (note ref. num. 50, Figs. 4-7) teach the use of an ionization filament network in an electrostatic air cleaner for the purpose of enhancing emission (note col. 5, line 48 to col. 6, line 45). It would have been obvious to one of ordinary skill in the art to employ an ionization filament network in the Carr and Johansson electrostatic plate heat exchanger air cleaner in order to facilitate emission as taught by Oakley et al.

14. Claim 6 is rejected under 35 USC 103(a) as being unpatentable over the prior art as applied to claim 4 above, and further in view of U.S. Patent No. 3,745,751 to Zey et al. The prior art, as described above in paragraph 12, discloses an electrostatic plate heat exchanger substantially as claimed with the exception of the water distribution system purifying the plates. Zey et al (note Figure 1, ref. num. 32) teach the use of a water distribution system purifying the plates of a plate heat exchanger for the purpose of ensuring the removal of agglomerated particles (note col. 3, lines 3-61). It would have been obvious to one of ordinary skill in the art to employ a water distribution system purifying the plates in the Carr and Johansson plate heat exchanger in order to facilitate particle removal as taught by Zey et al.

15. Claim 8 is rejected under 35 USC 103(a) as being unpatentable over the prior art as applied to claim 7 above, and further in view of International Publication No. WO 01/52711 to Zielonka. The prior art, as described above in paragraph 12, discloses a plate heat exchanger air cleaner substantially as claimed with the exception of high-grade steel plates. Zielonka (note page 2, lines 25-29) teaches the use of high-grade steel plates in a cleaner for the purpose of ensuring maximum cleaning (note Abstract) and for this same reason it would have been obvious to one of ordinary skill in the art to employ such an expedient in the prior art cleaner.

Conclusion

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16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. These references have been cited art of interest to show other electrostatic air cleaners and/or heat exchangers.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard L. Chiesa whose telephone number is (571) 272-1154.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane S. Smith, can be reached at (571) 272-1166.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center 1700 receptionist whose telephone number is (571) 272-1700.

Facsimile correspondence must be transmitted through (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Richard L. Chiesa
January 30, 2007

Richard L. Chiesa

**RICHARD L. CHIESA
PRIMARY EXAMINER
ART UNIT 1724**

Jan. 30, 2007